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One Size Doesn't Fit All: Customizing Educational Technology Professional Development (Part Three: Combining ETPD Goals & Models)

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One Size Doesn't Fit All

Customizing Educational Technology Professional Development

By Judi Harris

Part Three: Combining Goals & Models to Fit Teachers' Characteristics & Needs

Previous articles reviewed the range of educational technology professional development program goals and explained various ETPD models. In this installment, we will address how to combine goals and models to fit particular teachers' characteristics. Next month, we'll assess the efficacy of those designs.

Educational technology-related professional development (ETPD) can be designed in many different ways. It varies by general purposes and goals, specific learning objectives, curriculum content, the student grade levels for which the strategies and tools presented are appropriate, professional development model(s) used, how it is matched to participating teachers' characteristics, and the ways in which it is evaluated. Providers can ensure the effectiveness of technology-related professional development by considering these seven aspects during planning, so that ETPD sessions and programs align well with participating teachers' professional learning needs, interests, and contextual realities.

Last issue's article reviewed 20 different ETPD models, organized by five general types of professional learning. This installment explores combining goals and models then matching combinations to fit particular teachers' characteristics.

Planning ETPD

When designing ETPD, begin by selecting *goals* that can be applied to either individual professional development sessions or multiple-session PD programs. Base these selections on the learning needs and preferences of the educators for whom the ETPD is designed. There are six general goals that ETPD sessions or programs can address, either singly or in combination:

- Awareness and/or trial of specific tools or resources
- Curriculum integration in specific content areas
- Change in instructional practice, focusing on specific instructional techniques
- Curriculum and/or instructional reform
- School organizational or cultural change
- Social change beyond the school

For more on goals, see the first article in this series (*L&L*, February 2008, pp. 18–23).

Once goals and specific content for a particular session or program are selected, create the plan for offering the professional development. One way to do this is to combine selections from the 20 *instructional models* according to participants' needs, preferences, and contextual/logistical considerations. The 20 models are classified by five general types, according to the kinds of professional learning that characterizes each:

1. Instructor-organized sessions (six models)
   - Demonstration or awareness sessions
   - Hands-on workshops
   - Large-group and small-group interaction sessions
   - Large-group and small-group problem-solving sessions

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2. Individualized learning (four models)
   - Unassisted independent exploration
   - Assisted exploration
   - Individualized learning plan
   - Prescribed and managed instruction
3. Collaborative learning (five models)
   - Classroom visits
   - Mentoring
   - Peer coaching
   - Sharing best practices
   - Lesson study
4. Data-based inquiry (three models)
   - Independent action research
   - Action research done collaboratively with other teachers
   - Action research assisted by external researchers
5. Development of materials & approaches (two models)
   - Collaborative materials creation
   - Materials and approaches developed individually

More information on each of these ETPD models is available in the second article in the series (*L&L*, March/April 2008, pp. 22–26). Examples of specific programs that illustrate the models above are linked on the ETPD Web site that supports the series: http://etpd.wm.edu.

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How should models be matched to goals? Several examples illustrate this process.

Matching Models to Goals

Some goal and model combinations are easy to pair. To help teachers become aware of social information tagging tools such as del.icio.us, for example, use instructor-led sessions, such as brief demonstrations at faculty meetings, with optional hands-on workshops to follow for those who want to learn more about how these tools work. Address awareness and trial goals also in an individualized way, through unassisted or assisted exploration, as part of an individual professional learning plan or as part of specifically prescribed and managed instruction.

If the goal and focus is effective technology use in particular curricu-

lum areas, collaborative learning that takes place over time and with peers would probably be more effective than instructor-led sessions. Instructional practices are more often influenced by respected peers with similar responsibilities. In this case, use collaborative learning models such as peer-to-peer classroom visits, sharing best practices, and peer coaching.

Alternatively, if the primary goal is change in instructional practice focusing on specific instructional techniques—a more additive process than one concerned with focused change—use more reflective and long-term ETPD models, such as lesson study and mentoring.

If the professional development goals selected are more systemic and pervasive, such as curriculum and/or instructional reform, it is critical to have active, collaborative, and individual participation by teachers. PD models that are more generative, with participating teachers determining the specific objectives and procedures to follow to enact the reforms, are the most effective in this case. Use individual and collaborative development of materials and instructional approaches, along with data-based inquiry focused on the reform efforts.

Similarly, if the ETPD goals selected are also systemic but even more pervasive than instructional or curricular reform, such as school organizational or cultural change and social change beyond the school, use generative PD models. Supplement these by many, if not all, of the other ETPD models, so that the change happens in as many different ways and on as many different levels as possible.

Aligning with Teacher Characteristics

All professional development is designed to inspire change, whether small or systemic. Though certain PD models do support particular goals better than others overall, individual learners receive the same models differently. To whatever extent those differences can be accommodated is the extent to which the success of an ETPD design is ensured.

One of the central goals of all ETPD is to persuade the learner to learn about, try, then *continue to use* an innovation—in this case, a new instructional strategy, resource, or tool. A successful innovation must be *adopted*—that is, it must continue to be used in ways that lead to students' and teachers' educational success. Fortunately, there is more than 40 years of research on the diffusion of innovations—how new techniques, tools, and ideas spread within social groups—to help us to understand and assist the diffusion process.

This research, led by Everett M. Rogers, author of the book *Diffusion of Innovations*, teaches us about who adopts innovations, when they do so in comparison to their peers, and what conditions accompany these changes in behavior. Rogers has shown us that news of new techniques and tools travels by interpersonal connections. This means that each educator's decision about whether to use a new approach regularly—that is, to *adopt* it—is more dependent upon who shares the news of the idea than how well the new approach will probably work. Matching the specifics of ETPD designs to innovation-adopter characteristics is yet another way to customize them.

Adopter Characteristics & Models

One of the most remarkable aspects of diffusion research results is that no matter what kind of social system or what type of innovation was studied, similar proportions of most systems' members adopted the innovations according to a fairly predictable pattern over time. The members of each group of adopters share similar characteristics, with different groups' attributes being distinct from one another.

Innovators

The first ~2.5% of the members of a community to adopt a new tool, idea, or technique are the innovators—but only with respect to a particular innovation, rather than in general. (This is an aspect of diffusion research that is often misunderstood.) Rogers describes innovators as being "venturesome," with control of substantial resources. They can understand and apply technical knowledge easily, and they communicate most frequently with other innovators, often outside their local social system.

Innovators can withstand a large amount of uncertainty about an innovation without being discouraged from using it, and can therefore withstand multiple setbacks in the adoption process. They may not be either understood or respected by the majority of their local contemporaries.

Because of this pioneering spirit and practice, the ETPD models best suited to innovators are those with minimally assisted, individualized learning and data-based inquiry.

Early Adopters

The next ~13.5% to adopt an innovation are early adopters. In contrast to innovators, early adopters are generally well-respected by their peers. They are the "teacher to check with," for example, when a new approach is being considered. Early adopters are known to others in the social system for successful but discreet use of new implements, methods, or ideas, and as such often serve as role models for many others.

Since early adopters tend to be the opinion leaders in social systems (including school communities), with a

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heightened focus on quality, the ETPD models best suited to their learning are those that help participants to develop and determine best practices together. Models such as large- and small-group problem-solving sessions, sharing best practices, mentoring, and lesson study should appeal to members of this adopter group.

Early Majority

Early majority members comprise the next ~34% to adopt an innovation. Early majority members are known for interacting frequently with colleagues. Unlike innovators and early adopters, they do not often hold leadership positions within the social system, either officially or unofficially. Their primary role is to provide connections between and among the different interpersonal networks within the community. It takes early majority members longer to decide to try a new tool, technique, or idea than early adopters and innovators.

However, once a new idea has "caught on" among early majority members, it spreads rather quickly, mostly because of their predisposition to interact with others. It is during the adoption process among this particular subgroup's members that *critical mass* is reached. Given their predilection for interaction, the more collaborative and group-oriented ETPD models are best suited for early majority members' professional learning: large-group and small-group interaction and problem-solving sessions, and all five types of collaborative learning.

Late Majority

Members of the late majority in a social system comprise the next ~34% to adopt a particular innovation. These folks are quite skeptical of new ideas, methods, and tools, and this skepticism makes them more cautious about trying an innovation than any of the groups already discussed. They also have relatively scarce resources, when compared with the previous 50% of the local population, which adds to their challenges in using educational technologies in many schools with limited technology access.

Rogers tells us that late majority members will often adopt an innovation only out of necessity or due to strong peer pressure. For them to adopt, most of the uncertainty about the innovation must have been removed, and the norms for behavior and belief in the social system must already favor its adoption. The ETPD models that best support late majority learners are therefore group-based, structured, and more assisted than independent and include: demonstration or awareness sessions, hands-on workshops, organized classroom visits and peer coaching, and lesson study.

Laggards

Did you chuckle when you read the name that Rogers gave to this group? He warned us against seeing the last ~16% of the social system negatively, or as somehow worthy of blame. Laggards are the most traditional of all of the members of the social system. They are extremely cautious in the exploration of new ideas, tools, and techniques, and usually have few resources to support their doing so. Their point of reference is the past. Therefore, they often serve a very important function for the social system: they remember its history and provide its continuity.

While innovators are the most globally oriented of all of the social system members, laggards are the most locally focused. Yet, laggards and innovators are quite similar in that they most frequently interact with others similar to themselves, and they can be "loners" in the social system. They adopt an innovation a long time after they become aware of it, and usually only when existence within the community demands this change. The ETPD models best suited to their learning are individualized and assisted, such as individualized learning plans and individually prescribed and managed instruction.

Permutations and Combinations

Taxonomies describing ranges of possible ETPD goals, models, and learners and suggesting all of their possible permutations can be very helpful to PD designers. To structure successful ETPD, however, they must be used artistically, rather than mechanically. Technology integration is a complex endeavor involving curriculum content, pedagogy, and myriad contextual considerations, in addition to the attributes of the technologies themselves. Deep knowledge of these dynamics should guide the combining of ETPD goals and models into designs best suited to the characteristics of professional learners.

How can we determine the efficacy of an ETPD design with a particular group of educators? Answers to this question will serve as the focus of next issue's final article in this four-part series on customizing ETPD.

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